chemical composition SiO_2: 45-55 wt%, Al_2O_3: 33-42 wt%, MgO: 12-18 wt%, in a honeycomb fashion,

the honeycomb structural body having a cell density of at least 600 cells/in^2, a pore volume of said partition walls being at least 30%, an average roughness Rz of the surface of said partition walls being 1-5 μm, and said honeycomb structural body being a catalyst carrier having a catalyst loaded on the surface of said partition walls.

3. (Amended) A honeycomb structural body according to claim 1, wherein a thickness of said partition walls being no greater than 80 μm.

5. (Amended) A honeycomb structural body according to claim 1, wherein a mean size of fine pores formed inside said partition walls being 1-10 μm.

Please add the following new claims.

--7. (New) A honeycomb structural body comprising a plurality of cells formed by providing partition walls composed mainly of cordierite, which has the chemical composition SiO_2: 45-55 wt%, Al_2O_3: 33-42 wt%, MgO: 12-18 wt%, in a honeycomb fashion,

the honeycomb structural body having a cell density of at least 600 cells/in^2, a pore volume of said partition walls being at least 35%-80%, an average roughness Rz of the surface of said partition walls being 95-80%, an average roughness Rz of the

surface of said partition walls being 1-5 μm, and said honeycomb structural body being a catalyst carrier having a catalyst loaded on the surface of said partition walls.

8. (New) A honeycomb structural body according to claim 7, characterized in that the thickness of said partition walls is no greater than 80 μm.

9. (New) A honeycomb structural body according to claim 7, characterized in that the mean size of the fine pores formed inside said partition walls is 1-10 μm.

10. (New) A honeycomb structural body according to claim 1, characterized in that said honeycomb structural body is used as a catalyst carrier in an exhaust gas purification apparatus for an internal combustion engine.

11. (New) A honeycomb structural body according to claim 7, characterized in that said honeycomb structural body is used as a catalyst carrier in an exhaust gas purification apparatus for an internal combustion engine.--